

Remarks

Reconsideration and withdrawal of the rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1-5, 13-15 and 18 are now pending in the application, with Claims 1 and 18 being independent. Claims 11 and 12 have been cancelled without prejudice. Claims 1 and 13-15 have been amended and Claim 18 has been added herein.

Claims 1, 3-5 and 11-15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Laid-Open Patent No. 2000-143025 (Koto et al.) in view of U.S. Patent No. 5,502,545 (Tsuruoka). Claim 2 has been rejected under § 103(a) as being unpatentable in further view of U.S. Patent No. 4,549,826 (Stoeberl). With regard to the claims as currently amended, these rejections are respectfully traversed.

Independent Claim 1 as currently amended is directed to recording apparatus that conveys a recording medium by an endless belt member and performs recording on the recording medium by a recording device. In the apparatus, plural electrodes are lined up in such a manner to be along a surface of the endless belt member that contacts the recording medium. An electrical feed member applies a first electrical voltage to a part of the plural electrodes so that adjacent electrodes of the plural electrodes have different potentials to attract the recording medium to a position of the endless belt member located opposed to the recording device. A conveyance failure detection element detects a conveyance failure of the recording medium. A control portion controls the electrical feeding member to feed a second electrical voltage value to the part of the

electrodes in order to reduce or remove an attraction force of the endless belt member at the position opposed to the recording device based on a detection signal of the conveyance failure detection element.

In Applicant's view, Koto et al. discloses an image recording device in which a conveyor belt is provided with an attracting force generating means that has electrode plates formed of a conductive metal. When voltage is applied to the electrode plates, polarization is generated to a surface layer and a recording medium charging the electrode plates differently.. The generated electric field attracts the recording medium by electrostatic power. The positive and negative high voltage applied to the attracting force generating means suppresses lowering of printing quality caused by the electrical repulsion of a recording agent flying in proximity.

In Applicant's opinion, Tsuruoka discloses a jam processing device that has plural paper jam detectors positioned in a paper conveying path. A device forcedly ejects the jammed paper and a device selectively controls actuation of respective components in an image forming apparatus. The jam processing device is suitable for use in an image forming apparatus that holds a sheet of paper on a transfer belt and transfers toner images from plural photosensitive drums to the paper. When a paper jam is developed in the paper conveying path, a mode for forcedly ejecting the paper is initiated to charge and destaticize the transfer belt. Further, the paper is fed and ejected from the paper conveying path while each photosensitive drum is being charged and destaticized.

In accordance with the invention defined in Claim 1, a second voltage value is fed to the part of the plural electrodes to which a first electrical voltage was applied to

reduce or remove the attraction force of the endless belt member at the position opposed to the recording device. Advantageously, the attraction force of the portion of the endless belt member opposed to the recording device is reduced or eliminated.

Koto et al. may disclose a recording apparatus that supplies electricity to a belt member to adhere a recording medium to the surface of the belt member. As recognized by the Examiner, Koto et al. fails to teach a conveyance failure detection element that detects a conveyance failure of the recording medium or a control portion that performs control of the belt member and electrical feeding member based on a detection signal of the conveyance failure detection element.]

Tsuruoka discloses sensors that detect conveyance failures and also discloses destaticizing a portion of an endless transfer belt. In Tsuruoka, however, as clearly disclosed at lines 35 through 40 in Column 8 with respect to Fig. 2, "A pair of transfer-belt destaticizing corotrons 37 for destaticizing the transfer belt is provided upstream of the cleaning device 27 so as to form a means for removing the previously-applied charges at a previous stage in allowing the transfer belt to newly carry or bear the paper by static electricity." The destatisizing corotrons 37 are not located in a position opposite a recording device and are remote therefrom so that the portion opposed to the recording device is not destaticized and still attracts the recording medium.]

Further, the destaticizing corotron construction in Tsuruoka is completely different than plurality of electrodes lined up so as to be along a surface of an endless belt member that contacts a recording medium as in Claim 1 so that it is not seen that Tsuruoka in any manner teaches or suggests the feature of a second voltage value fed to the part of

the plural electrodes lined up to be along a surface of the endless belt member located to a position opposed to the recording device to which a first electrical voltage was applied to reduce or remove the attraction force of the endless belt member at the position opposed to the recording device.

With regard to the cited combination, Koto et al. as discussed fails to teach a conveyance failure detection element or a control portion that performs control of a belt member and an electrical feeding member based on a detection signal of the conveyance failure detection element. Tsuruoka only teaches a destatisizing corotron that is remote from a position opposite a recording device and operates in a completely different manner than the plurality of electrodes of Claim 1. Accordingly, it is not seen that the addition of Tsuruoka's destatisizing corotron operating remotely from the position of the recording device to Koto et al.'s recording device conveyor belt arrangement devoid of a conveyance failure detection element or control to remove an attracting force from an endless belt at a position opposed to a recording device could possibly suggest the features of Claim 1. It is therefore believed that Claim 1 as currently amended is completely distinguished from any combination of Koto et al. and Tsuruoka and is allowable.

Newly added Independent Claim 18 is directed to recording apparatus that conveys a recording medium by an endless belt member and performs recording on the recording medium by a recording device. In the apparatus, plural electrodes are lined up to be along a surface of the endless belt member that contacts the recording medium. An electrical feeding member charges a part of the plural electrodes to a predetermined potential in such a manner that adjacent electrodes of the plural electrodes have different

potentials to attract the recording medium to a position of the endless belt located opposed to the recording device. A conveyance failure detection element detects a conveyance failure of the recording medium. A control portion controls the electrical feeding member to reduce or eliminate the charge of the part of the electrodes in order to reduce or remove an attraction force of the endless belt at the position opposed to the recording device based on a detection signal of the conveyance failure detection element.

It is a feature of Claim 18 that an electrical feeding member that feeds a predetermined potential to a part of plural electrodes lined up along a surface of an endless belt member contacting a recording member opposed to a recording device is controlled to reduce or eliminate the charge on the part of the plural electrodes to reduce or remove the attraction force of the endless belt member at the position opposed to the recording device based on a detection signal of a conveyance failure detection element.

As discussed with respect to Claim 1, Koto et al. does not teach a conveyance failure detection element or a control portion that performs control of a belt member or an electrical feeding member based on a detection signal of the conveyance failure detection element. Tsuruoka is restricted to teaching a destatisizing corotron that is remote from a position opposite a recording device and operates in a completely different manner than the plurality of electrodes of Claim 18. Accordingly, it is not seen that any combination of Tsuruoka's destatisizing corotron operating remotely from the position of the recording device with Koto et al.'s recording device conveyor belt arrangement devoid of a conveyence failure detection element or control to remove an attracting force from an endless belt at a position opposed to a recording device in any manner suggests the feature

of Claim 18 of feeding a predetermined potential to a part of plural electrodes lined up along a surface of an endless belt member that contacts a recording member opposed to a recording device and controlling to reduce or eliminate the charge on the part of the plural electrodes to reduce or remove the attraction force of the endless belt member at the position opposed to the recording device based on a detection signal of a conveyance failure detection element. It is therefore believed that newly added Claim 18 is completely distinguished from any combination of Koto et al. and Tsuruoka and is allowable.

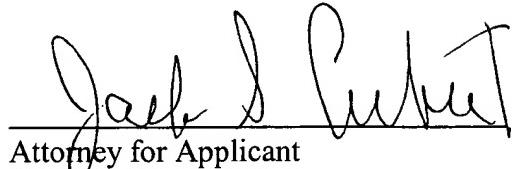
Thus, independent Claims 1 and 18 are believed to be patentable over the citations of record. Reconsideration and withdrawal of the § 103 rejection are respectfully requested.

For the foregoing reasons, Applicant respectfully submits that the present invention is patentably defined by independent Claims 1 and 18. Dependent Claims 2-5 and 13-15 are also allowable, in their own right, for defining features of the present invention in addition to those recited in their respective independent claims. Individual consideration of the dependent claims is requested.

Applicant submits that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

Applicant's attorney, Mark A. Williamson, may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

  
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